Geographic Review Panel 4 – San Joaquin River

Proposal number: 2001-K203 **Short Proposal Title:** Merced River Temperature Management Feasibility Study

1. Applicability to CALFED ERP Goals and Implementation Plan and CVPIA priorities, and relevance to ERP and CVPIA priorities for your region. The Panel believes, and concurs with previous reviews, that this temperature management feasibility study has high regional importance and could lead to operational and/or structural modifications that could provide important temperature benefits that would benefit production of fall-run chinook salmon and possibly steelhead trout. Because the San Joaquin River tributaries are at the southern most extent of the fall run chinook salmon, elevated water temperature invariably creates problems in some years for chinook salmon production, especially in tail-run fisheries that prevent access to upstream habitats where thermal refugia exists. Because of the importance of temperature to salmonid population management in the San Joaquin, the other two tributaries have or are currently developing daily or weekly temperature models to evaluate management alternatives. The Merced River would also benefit from a sufficient model and alternative analysis to evaluate existing conditions and remedial alternatives. Each San Joaquin River tributary present their own set of unique hydrologic conditions that warrant a specific model and evaluation for each system. Both ERP and AFRP planning documents rank this sort of effort as a high priority.

2. Linkages/coordination with previously funded projects or other restoration activities in your region. There is a clear linkage between this proposal and a wide variety of restoration and management activities. Large-scale channel and floodplain restoration projects are currently underway on the Merced River. Spawning and rearing habitat requirements for chinook salmon and steelhead are multi-dimensional and complex. However, the ability to provide additional cool water during the fall spawning season and late-spring outmigration season, coupled with structural spawning and rearing habitat improvements should provide production benefits in most years. There are also ongoing genetic studies of San Joaquin River tributaries that will attempt to make inferences about local adaptations, or differences of southern salmon populations. There are also proposed physiological studies that are intended to complement the genetic studies. These ongoing, or proposed evaluations, in combination with improved temperature management flexibility should collectively provide an important suite of information that would improve our understanding and ability to more effectively manage for San Joaquin River tributary salmonid populations.

3. Feasibility, especially the project's ability to move forward in a timely and successful manner. Factors affecting downstream river temperatures are well articulated in the conceptual model. However, most of the detail related to the most important task (Task 2 on modeling runs and management alternative evaluations) was inadequate to evaluate the technical feasibility. The proposal basically leaves the details up to the work of an unspecified contractor with no initial front-end guidance or specificity. No information on the type of model, its time-step, or parameters would be evaluated; and

whether or not the model and evaluations would include linkages to each of the four reservoirs whose purpose range from storage and flood control, re-regulation and diversion. The four reservoir linkage is implied in Task 1 through compilation of existing information, but not explicit enough to know if these data are adequate or if additional reservoir data would be needed to include these reservoirs in a modeling effort. The Panel feels that additional clarification is needed before Task 2 is funded.

4. Qualifications of the applicants and others involved in implementing the proposed project. Project management and consultants are well equipped to handle the collection of additional flow, temperature and operational information, but they would not be qualified to do the modeling. And, since this is left up to a contractor to-be-selected no evaluation of the modeler's qualifications is possible. However, the Panel feels that through applicant's interaction with the groups and agencies already doing this type of work in the basin that the selection of a competent contractor should not be a problem.

5. Local involvement (including environmental compliance). Plans for local involvement appear adequate with the exception that proponents should better describe the linkages between the MID-CDFG initiated Technical Advisory Committee and that of the Merced River Stakeholder Group.

6. Cost. Costs for each phase appear reasonable based on a comparison to the cost of a similar effort on the Stanislaus River.

7. Cost sharing. Cost sharing is good at about 20% of the total project cost, or $75,000.

8. Additional comments. This Panel is concerned about the lack of specificity of the most important task, and concludes that it is premature to fund this phase. With successful completion of Task 1, the proponent would be in a much better situation to detail the level and type of modeling and alternative analysis effort. This panel recommends funding of Task 1 (Compile and summarize pertinent physical project specifications, operating strategies and requirements, related agreements, and existing thermal and flow information and biological monitoring activities in the four Merced River reservoirs and the lower Merced River), with a future resubmission of a request for funding of subsequent tasks. The proponents may also want to connect with the temperature monitoring group on the Stanislaus River for more detail of the temperature modeling and management alternative analysis effort currently underway.

Regional Ranking

Panel Ranking: Medium high (task 1 and associated components of Tasks 4 and 5 only)

Provide a brief explanation of your ranking: This Panel believes this assessment is of regional importance and needed to facilitate better management of salmonid populations in the Merced River. However, the Panel believes that Tasks 1 and 4, and associated

project management (a component of Task 5), are justified and should be funded. However, it is premature to fund Tasks 2 and 3 based on the level of detail presented in this proposal. Implementation of these tasks would be better served as Task 1 develops and more detail on subsequent needs can be provided.